

REMARKS:

Claims 1 and 3-20 are in the case and presented for consideration.

Claim 1 has been amended to require both the first and second guide posts to be fixed to the bar as supported by the specification at paragraph [0070] on page 14 indicating that the posts are made as one piece with the bar. The posts are also required to have different diameters from each other as supported by paragraph [0071] and also, importantly, the guide includes an extension shown at 115 in Figs. 16-19 which has an end surface 115g which is concave as shown in Fig. 18 and which is at a distance of about 3 to 8 mm from the central axis of the coaxial posts as supported in the specification in paragraphs [0076] and [0077] on page 16 and as shown in Fig. 17.

This ensures that the dentist even when trying to insert one of the posts 162 or 163 into a hole, must be at least a minimum distance from the adjacent tooth or implants. If the dentist cannot insert the pin which means that the hole is too close to the adjacent tooth or implant, he or she must either angle the hole or abandon the hole for fear of damaging the adjacent tooth or implant or injuring the patient.

None of the prior art has any analogous structure to a concave surface for the extension either structurally or for the purpose of establishing clearance.

The use of removable posts or pins as advocated for example by Abrahami, is also avoided and, in fact, is a detriment since the presence of small removable parts within the mouth increases the risk of swallowing the parts and increases the chance of error in selecting the wrong diameter of pins or using them in the wrong way. This also invades the sterile field of the operation.

Turning now to the references specifically, Vaughan clearly discloses a flat end

surface 20 and 24 (see Fig. 1 of the reference) and being used for an engine, certainly would not have the range of spacing nor the purpose for spacing this surface from the pin 44 in Vaughan.

Abrahami also has a flat surface shown at part 12 in Fig. 1 and no teaching for using that surface to maintain spacing. See Fig. 2 of the reference for example.

Even the inventor's previous patent has no such flat concave outer surface nor requires such a surface for maintaining a selected spacing.

In the present invention, surface 115g, and its bounding edge 115e as shown in Figs. 16 and 18, are concave to obtain maximum contact and stability against an adjacent tooth crown-root convexity or implant convexity. This surface would also be advantageous against a directional pin which is cylindrical and is placed in an initial osteotomy. This concave end surface of the guide of the present invention is structurally different and quite unobvious over the prior art. It is not found in any of the references cited and, in fact, is not found in any of the guides currently being used in the field. The inventor of the present application is a practicing implantologist who actually uses the technology available today.

Turning to the significance of the fixed posts, both Vaughan and Abrahami teach removable pins 44, 46 and 48 in Vaughan and 38 and 42 in Abrahami. In the present invention, posts 162 and 163 are permanently fixed and have different diameters. In this way, the dentist can change diameters simply by reversing the guide of the present inventions and need not screw or unscrew locator pins and, thus, expose the patient to safety hazards due to possible operator error or even swallowing of these small parts. None of the references provide this dual diameter capacity by simply flipping the guide over, but instead advocate the more complex removable pin approach. The invention thus

is beneficial to implant surgeons who have minimum time to produce the implant holes and should be free from having to assemble or disassemble parts during the operation. Maintenance of sterility is also another issue since anytime the guide must be removed from the mouth to change posts as in Abrahami, sterility is compromised.

Placement of the concave surface at a certain spacing from the center line of the posts is also significant. As noted above, if a dentist tries to insert pin 162 into a pilot hole, but is unable to do so, he or she realizes that there is a problem with the pilot hole and cannot keep it as is because it will be too close to an adjacent tooth or implant. Neither Vaughan nor Abrahami suggest any solution to this problem nor design their ends to be concave and, thus, engage an adjacent tooth in a positive manner. Nor is it taught the minimum spacing called for in claim 1 of the present application. Although the Examiner states that 3 mm would be obvious to one of ordinary skill in the art, this does not take into account possible error and the fact that the dentist is working in a very difficult environment, the mouth which at best is wet with saliva and at worst has bone and tissue debris, blood and other fluids in the operating theater. The inventor of the present application and others have published various articles about the errors that have occurred during implant procedures. The present invention provides an advantageous and unobvious guide over everything currently known in the prior art and just as importantly everything that is currently being used.

The remaining claims are believed to distinguish the invention even further from the prior art so that the application and claims are now believed to be in condition for allowance.

Favorable action is respectfully requested.

Respectfully submitted,



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IN THE DRAWINGS:

Please accept the new set of formal drawings containing all of Figs. 1-19 which are labeled "Replacement Sheet" and have been executed to be in proper form for acceptance.